

ABSTRACT OF THE DISCLOSURE

A separator for non-aqueous electrolyte secondary battery, wherein the separator comprises a shut-down layer, a heat-resistant microporous layer, and a spacer having a form of particles, fibers, net or porous film on the surface of the heat-resistant microporous layer. The separator has a shut-down function, heat-resistance and excellent electrochemical oxidation resistance, and a battery having improved safety can be produced.